

### **Abstract of Disclosure**

A method and apparatus for measuring the elastic characteristics of a medium by estimating variations in the speckle patterns in ultrasound images. The method for measuring the elastic characteristics of a medium comprises the steps of applying vibrations to the medium; acquiring a plurality of ultrasound image frames of the medium; estimating a variation in brightness of the speckle pattern over the plurality of ultrasound image frames; and measuring the elastic characteristics of the medium based on the estimated brightness variation. The apparatus for measuring the elastic characteristics of a medium comprises a vibrator for applying vibrations to the medium; transducers for acquiring a plurality of ultrasound image frames of the medium; a device for estimating a variation in brightness of a speckle pattern over the plurality of ultrasound image frames; and a device for measuring the elastic characteristics of the medium based on the estimated brightness vibration.